AMENDMENTS TO THE CLAIMS

Claims 1-24 were pending in the application. Claim 1 is an independent claim and claims 2-24 depend therefrom. Claims 25-31 were previously withdrawn. Claims 1-2, 5-6, 9-10, 13 and 17 are currently amended.

Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A system that enhances the performance of a cochlear implant using a preprocessor, the system comprising:

~~at least one~~ a plurality of signal input devices, comprising at least one of a microphone and a telecoil;

a first processor coupled to said plurality of ~~at least one~~ signal input devices for performing signal processing on signals received from said plurality of ~~at least one~~ signal input devices, wherein said first processor comprises at least one automatic-switching mechanism configured to at least one of:

switch between modes of said microphone ~~at least one signal input device~~,

switch between said microphone and said telecoil based at least in part on detection of a magnetic field~~at least one signal input device~~, and

switch between a plurality of listening programs based at least in part on detected characteristics of signals received from said plurality of signal input devices; and

a second processor that processes and encodes the signal in cochlear implants.

2. (Currently Amended) The system according to claim 1 wherein said plurality of ~~the at least one~~ signal input devices comprises a ~~is one of microphones(s),~~ direct audio input~~, telecoil, and other forms of analog or digital signals inlet~~.

3. (Previously Presented) The system according to claim 1 wherein the first processor comprises at least one of algorithms stored in a memory or chips used in hearing aids, hearing protectors, and other audio devices.

4. (Previously Presented) The system according to claim 1 wherein algorithms associated with the first processor are implemented in the same chip and case as algorithms associated with the second processor.

5. (Currently Amended) The system according to claim 1 wherein the first processor and the plurality of ~~at least one~~ signal input devices are housed in a first case.

6. (Currently Amended) The system according to claim 5 wherein the second processor and the plurality of ~~at least one~~ signal input devices are housed in a second case.

7. (Original) The system according to claim 6 wherein an output of the first processor is fed into the second processor.

8. (Original) The system according to claim 6 wherein the system further comprises:

a wireless transmitter connected to the first processor; and

a wireless receiver connected to the second processor, wherein an output of the first processor is wirelessly transmitted via the wireless transmitter to an input of the second processor via the wireless receiver.

9. (Currently Amended) The system according to claim 1 wherein the system further comprises the plurality of ~~a~~ signal input devices housed in a first case.

10. (Currently Amended) The system according to claim 9 wherein the first processor is housed in the ~~a~~ first case.

11. (Original) The system according to claim 9 wherein the second processor is housed in the first case.

12. (Original) The system according to claim 9 wherein the system further comprises a circuit that provides compatibility matching between the first processor and the second processor.

13. (Currently Amended) The system according to claim 1 wherein the system further comprises the plurality of signal input devices housed in a first and second case.

14. (Original) The system according to claim 13 wherein the first processor is housed in the first case.

15. (Original) The system according to claim 14 wherein the second processor is housed in the second case.

16. (Original) The system according to claim 13 wherein the second processor receives a processed signal from the first processor via the signal input device in the second case.

17. (Currently Amended) The system according to claim 1 wherein the system further comprises the plurality of ~~a~~ signal input devices housed in a first case.

18. (Original) The system according to claim 17 wherein the first processor and the second processor are housed in a second case.

19. (Original) The system according to claim 9 wherein the system further comprises a circuit that provides compatibility matching between the first processor and the second processor.

20. (Previously Presented) The system according to claim 1 wherein the first processor comprises at least one of:

at least one signal processing stage;

at least one signal processing algorithm stored in a memory; and

at least one component.

21. (Original) The system according to claim 20 wherein the second processor utilizes at least a portion of the first processor.

22. (Original) The system according to claim 21 wherein the first processor contains at least one signal feeding point and at least one signal extraction point to which connection can be made to feed signals into and extract signal from the system.

23. (Previously Presented) The system according to claim 1 wherein the second processor comprises multiple signal processing stages, wherein the first processor is connected between the multiple signal processing stages of the second processor.

24. (Original) The system according to claim 1 wherein the second processor is an amplification device.

25. (Withdrawn) A method that enhances the performance of a system of a cochlear implant using a pre-processor from a hearing or audio device, the system utilizing at least one signal input device, a first processor, and a second processor, the method comprising:

collecting sounds from a surrounding environment or other hearing or communication devices by the at least one signal input devices;

preprocessing at least a portion of the collected sounds in the first processor using at least one of:

noise reduction techniques,

speech enhancement techniques,

adaptive directionality techniques, and

microphone-matching signal processing techniques;

feeding the preprocessed sounds into the second processor;

processing the sounds in the second processor; and

feeding the processed sounds into a transmitter.

26. (Withdrawn) The method according to claim 25 wherein the feeding of the preprocessed sounds into the second processor is done over at least one of a wireless medium and a wired medium.

27. (Withdrawn) The method according to claim 25 wherein the preprocessed sounds are fed into a circuit that provides compatibility matching between the first processor and the second processor.

28. (Withdrawn) The method according to claim 25 wherein at least a portion of the preprocessing is performed by the second processor.

29. (Withdrawn) The method according to claim 25 wherein at least a portion of the preprocessing is performed by the first processor.

30. (Withdrawn) The method according to claim 25 wherein the first processor is capable of receiving signals from two different signal input devices, wherein the two different input devices represent microphone inputs placed in or near the two ears for bilateral cochlear implants.

31. (Withdrawn) The method according to claim 25 wherein the preprocessed signal is fed into two second processors via a "Y" connection for bilateral cochlear implants.